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Combat Crew

strategic air command

MAY 1990
★★★★

Combat Crew

Magazine of the Strategic Air Command—40th Year of Publication

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On Our Cover

Ever wonder what its like to soar silently high above the earth like the TR-1 on our cover? Turn to page 20 for some impressions and interesting perspectives on "dollar" rides.

SACSP 127-1 VOL. XL NO. 5 MAY 1990

COMBAT CREW is an internal publication of the Strategic Air Command with the primary purpose of promoting safety. The contents of this magazine are informative and not to be considered as directive in nature. Facts, testimony and conclusions of all mishaps herein may not be construed as incrimination under Article 31 of the Uniform Code of Military Justice. All names, dates and places used in conjunction with mishap stories are fictitious. Written permission must be obtained from Headquarters, Strategic Air Command before any material may be reprinted by other than U.S. Air Force organizations. Use of funds for printing this publication has been approved by Hq. USAF, Distribution FX, controlled by IGFE, SAC units submit distribution requests through local PDO. Reader to copy ratio one per combat crew; 10:1 for other SAC personnel. For sale by the Superintendent of Documents, U.S. Government Printing Office, Washington, D.C. 20402.

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From The Editor's Desk

The Universal Law of Synergism is with us, even if we know it by another name (see page 22).

We can't ignore this law but we can break the chain of events and prevent one little mistake from blossoming into a huge boo-boo.

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You Asked For It; You Got It!

The maxim that "flexibility is the key to air power" is on target providing, and on the condition, that the aircrews are well trained. At a time when lots of restructuring is in the offing, it is vital to emphasize combat readiness and more effective training. We pursue those twin goals knowing that our job of providing lethal solutions to foreign policy problems is best accomplished if we are never used. So, we prepare and we train so as to continue to deter conflict by being ready to fight.

A good question, then, is: "How good is our training?" The answer is: never good enough. We are all perfectionists and want to be better. We need more hours – more sorties –more practice. The obvious balancing of resources and the need to manage risk factors attendant to our business makes us approximate the "train like we'll fight" approach. We need to get as close as we can while still maintaining an air discipline that makes sense. What makes real sense is that training in the air is a very individual business. One pilot or navigator may need a lot more emphasis in one area vice another.

While core capability to be "mission ready" is essential, SAC training philosophy has long been based on centralized and standardized training regulations that direct basically the same training for all units. This training is validated by regulations, checks, Stan-Eval, IG evals and other tools. These yardsticks and an impressive flying safety record have measured significant and noteworthy combat potential. But, new demands and missions, as well as the overarching importance of our nuclear deterrence tasks, demand that we relook the centralized and standardized aspects of our flying training regulations.

In the past few months, SACR 51-series experts from throughout the command met and rewrote our training regulations in an effort to accommodate our changing conditions. The resulting regulations better incorporate the notion that wing and squadron commanders are in the best position to make those decisions on how to best train their aircrews. While SAC will continue to specify core requirements necessary to insure safety and basic mission capability, new latitude has been factored in for the squadrons and wings.

To summarize the approach, a continuation training program has been crafted that provides for unit combat capability, while providing more discretionary hours/sorties for use to "individualize" training needs. We want to reduce the chasing of events for events sake and establish a better way to do it. It breaks out to be about a 3/4 to 1/4 proposition. The command designated mandatory core (Combat Capable) training requirements will utilize about 3/4 of the available resources (hours/sorties). Over and above specified core activity, the unit commander will have the discretion to use the remaining hours to best meet the aircrew training and operational support requirements of his unit. The focus will be on individual needs vice "one shoe fits all." There are other small changes in the soon to be released 51-series designed to enhance our ability to operate and train. For example, events are combined, currencies changed and, importantly, bombing qualification added. The thrust is for the wing commander to gain more flexibility to operate more efficiently and effectively in both SIOP and conventional operations. There is an added point that is fundamental: Given added flexibility and added authority comes added responsibility. The decentralization of SAC's training effort requires a higher level of accountability at wing and squadron levels. You asked for it; you got it. We implement this summer; I think you'll like it. ★★

Maj Gen John Borling "VIKING"
Deputy Chief of Staff, Operations
Strategic Air Command

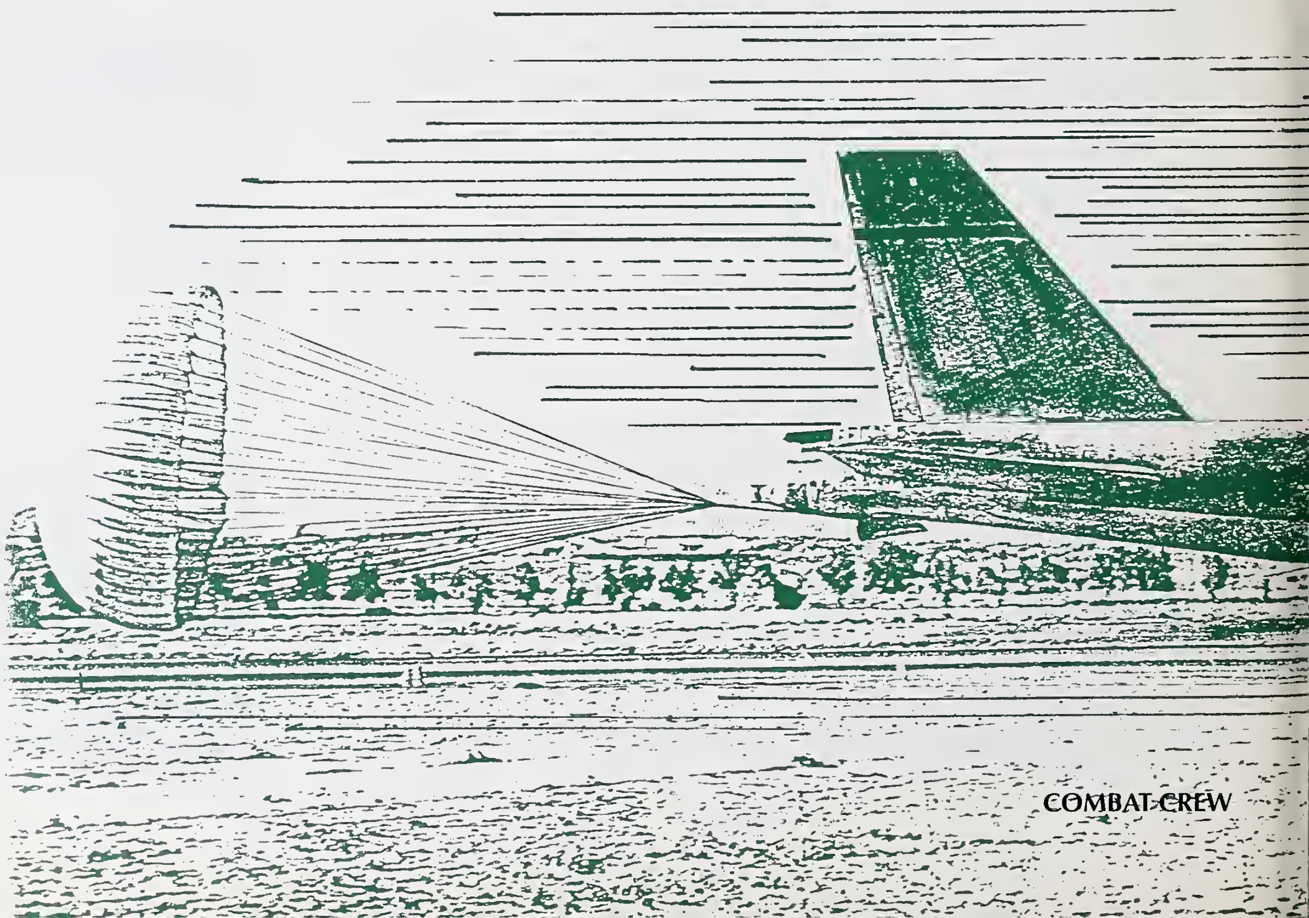
Al Lert's Deployment II

LtCol Sam Villagran
HQ SAC/IGFF

Deployments are sometimes thought of as SAC's way of practicing to go to war. It can also be crew members' way of practicing what they've learned, but more importantly, learning what can happen to them when they're out of their normal day-to-day environment. These missions also provide a good insight into our habit patterns.

There we were... to coin a phrase. The flight to our deployment base had been uneventful. We had departed home station and after seven hours of three-ship A/R, low level and high level cruise, we finally reached our destination. Daylight had left us hours ago, so we reviewed our procedures for a night landing into an airfield where the final approach would lead us through an unlit, no visual references, pitch black desert. Glideslope information, except for distant VASI's, was nonexistent, so we planned on the nav team providing us with distance versus altitude calls. The opportunity for visual illusions loomed ahead. The departure end of the airfield was lit up like Las Vegas at Christmas time. For those of you who have flown into Biggs Army Airfield at night, you know what I'm talking about.

I was the IP on this flight and the pilot in the right seat was scheduled for the landing. Since the aircraft commander was new, he was not yet signed off to monitor his pilot's land-



ings. Seeing an opportunity for some yoke time, I jumped into the left seat for the landing.

As always, we briefed the approach prior to departing the high altitude structure and as briefed at home station, we all planned on holding our drag chutes, barring any emergency! Finishing up the checklist, we proceeded on down. The approach was flawless. The pilot's descent rate matched the radar nav's calls. Prior to our precomputed VDP, we again regurgitated our landing procedures.

"Okay, Co, (back then we could still call them Co's!), you get the throttles to idle, I'll get the airbrakes to six, hold the chute (as planned!)..." Just like clockwork.

The cockpit lighting was low and it was dark both in the cockpit and outside. Our computed best flare speed was about 130 knots, give or take a few.

After getting the winds from tower, I again confirmed our gear down for a full stop. The landing, if I remember correctly, was good, and we had plenty of runway left in front of us to allow us to roll out without having to use much braking. Bringing the airbrakes to six, I suddenly felt a sudden deceleration.

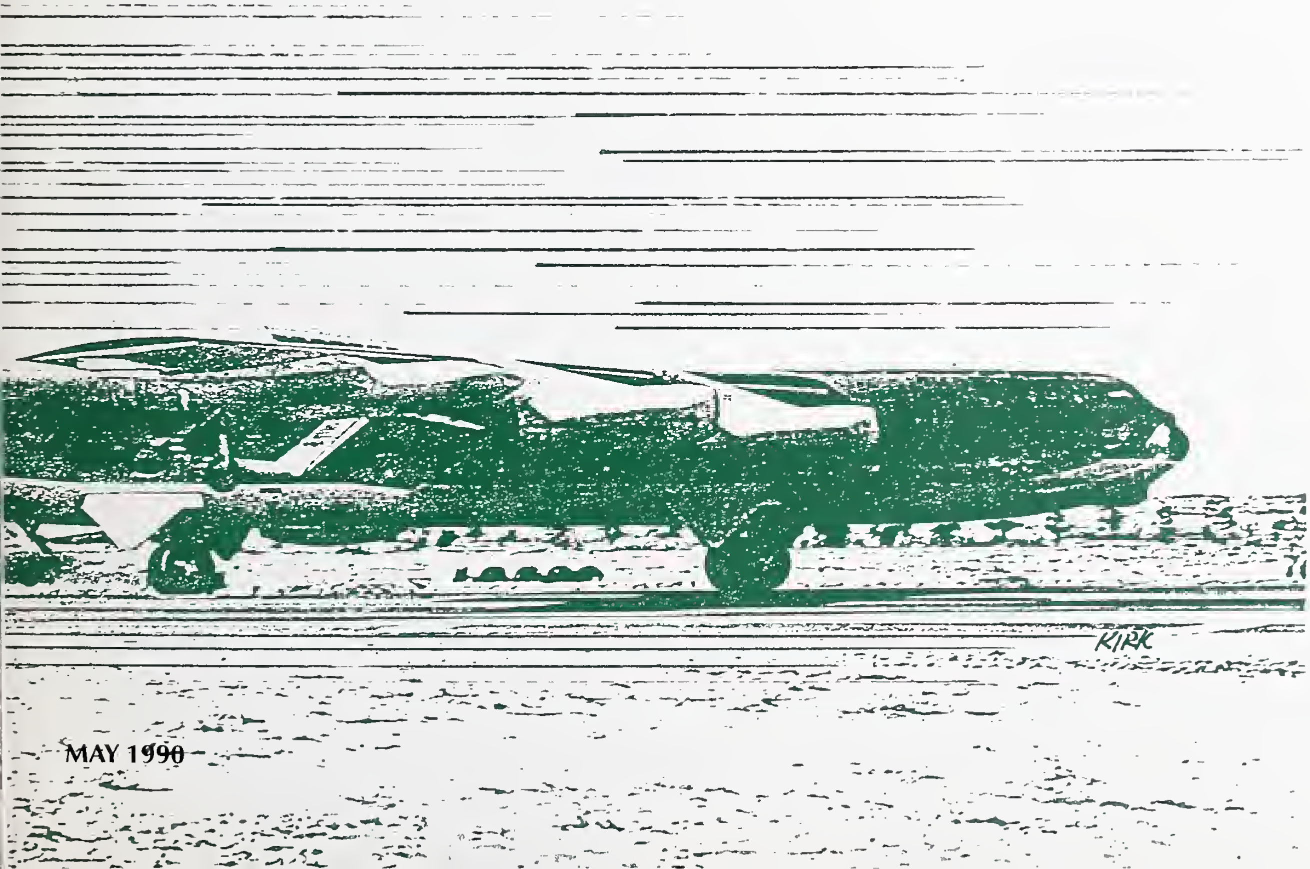
"Hey, Co!" I yelled across the cockpit, "get off the brakes." The thought of landing with locked brakes quickly raced through my mind. All of a sudden, I heard a low chuckle from the AC in the IP seat. "Yo, IP, the chute's out!" There I sat, wondering, Did I not brief, rather, didn't we brief we would hold the chute? It wasn't long after the AC's comment that I heard an "aw shucks!" from the right seat (figuratively speaking).

Maintenance was downright happy when Buff 52 appeared out of the darkness, chute fully blossomed, taxiing all the way to parking. Buff 53 and 54 were right behind us, so we had to drag it all the way. The whole world knew.

Habit patterns are well and fine if you stay on top of them. They can get downright embarrassing, if not dangerous, when you let them take control of you. In this instance, everybody learned a valuable lesson. We received a lot of well deserved grief for being the only crew, or should I say, pilot team, to use a drag chute that night.

What's the lesson? I guess it's that no matter how many times you brief you will do a certain item, e.g., hold the chute, the old brain will do what it's accustomed to, especially in an unfamiliar environment, if you let it. Make sure the brain is engaged with the body to preclude any unwanted bodily functions. **Fly smart, Fly Safe!**

Okay, everybody! We know there are a lot of you out there who have experienced some sort of incident, especially on deployments, which have a tendency of staying there. We can all learn some good lessons and may be even get a chuckle or two. Learning from the mistakes of others is the "key" to mishap prevention. With your help, we can provide this "key" to others. **Al Lert's Deployment III is waiting for your story!**



Technical Data in an EWO Environment

Maj James P. Briggs
3901 SMES/DOX

> "In critical areas involving release or withhold of nuclear weapons, there is no room for incomplete knowledge or substandard performance."

The ultimate goal in an Emergency War Order (EWO) environment for you, the crew member, is when directed, to deliver bombs on targets. To do this, total familiarity with your technical data is a must. We've all heard the old cliche "By the book or buy the farm." EWO technical data is designed to accomplish specific tasks in an efficient and safe manner.

The consequences of incorrectly applying technical data or failing to follow checklists step by step could result in the loss of equipment, failing to meet single integrated operational plan (SIOP) commit, and possible injury or death to innocent civilians and fellow military members. Personnel working with nuclear weapons must realize, "in critical areas involving release or withhold of nuclear weapons, there is no room for incomplete knowledge or substandard performance." (SACR 55-45, Vol I) This holds true for the designers, maintainers, and operators who work with or around nuclear weapons. As maintainers and operators, you have been entrusted by the people of this nation to safeguard them. You jeopardize this trust if you fail to maintain proficiency in EWO checklists. Your full understanding of the reasons behind each and every step, warning, caution and lead-in in your technical data is vital to the performance of your job as a warrior.

Through continuous technical data study, four things will happen. First, you will become so familiar with your technical data that in the heat of the battle you won't waste time hunting for the information required to accomplish a task. Secondly, you will understand why tasks or steps are accomplished in a particular sequence, allowing you to work around unforeseen problems which may occur in an EWO environment. Knowing why and how something works allows you the opportunity to fix problems and achieve the proper end result rather than just doing a step and not understanding why you are doing it. The latter results in the inability to handle new or unique problems, because you lack the conceptual knowledge required to determine the course of action needed to correct the problem. Third, through review and self-study, you become familiar with changes required to improve the effectiveness and safety of the system. Understanding all facets of your technical data ensures compliance, eliminates indecision and could save valuable time, resources, and even lives. Relying on outdated knowledge can result in disaster which is unacceptable in the profession of arms. Lastly, study and practice always increase proficiency and confidence in one's ability to handle any situation. This aspect is critical to all entrusted to safeguard nuclear weapons.

Knowing the ins and outs of your technical data is not enough. You must also achieve and maintain disciplined methodical checklist processing. Checklist discipline prevents misapplication of steps and ensures weapons will arm, launch, and detonate on predetermined targets. Without it, you are destined to failure. Again, the proverb of "by the book or buy the farm", has never been more applicable than it is when processing your EWO technical data. You need discipline to accomplish each step in the proper order. Don't fall into the trap of skipping steps. Read and apply the warnings, lead-ins, and cautions associated with each step listed on the checklist. The lack of checklist discipline always results in an ineffective crew who can't meet its SIOP commitment and jeopardizes the effectiveness and war fighting ability of those who have sworn to protect this nation.

Crew coordination is also vital in the management of nuclear weapons. You must know what your crew partner is doing and doublecheck all actions to ensure proper application or weapon system safety rules and EWO procedures. Not abiding strictly by established rules and procedures always results in "buying the farm" for everyone. Each member of the crew needs to articulate clearly and listen carefully to one another when passing or receiving information. Remember, misinterpretation of data and direction results in not accomplishing actions needed to meet commit and put bombs on target.

The front line defense for our nation rests with you, the crew member. Your EWO performance in training and evaluation is closely scrutinized by our enemies to determine any weakness, lack of resolve, or inability to wage war if called upon to do so. A warrior is only as effective as his ability. Only through self-study, discipline, practice, and crew coordination do you maintain the razor sharp skills required to inflict unacceptable damage to an adversary, thus avoiding war. So, the next time you have the urge to blow off your self-study of EWO checklists, remember, you are helping the enemy and increasing the chances of your nation **"buying the farm"** in a nuclear conflict.

1990 SAC'S YEAR OF REVIEWING FUNDAMENTALS

As we focus on military heritage in the second quarter of SAC's "Year of Reviewing the Fundamentals," our reflections will undoubtedly revolve around how central our strategic mission is to the concept of enduring deterrence. From the development of the subsonic Snark to the deployment of the ten warhead Peacekeeper, the history of our ICBM force is characterized in terms of strength and dependability. This is due to the men and women in our missile fields who operate, maintain, and protect our ICBM force day after day, in order that our nation may forge ahead in freedom year after year. Nowhere will the pride and capabilities of these warriors be more apparent than at Vandenberg AFB, CA, as the spirited missile warriors do battle in the 1990 SAC Missile Combat Competition.

The Command's first missile competition in 1967, held in the shadow of the Vietnam War, entailed two operations crews and one target alignment team from each of the nine ICBM wings. In 1975, as SAC supported the evacuation of refugees from Southeast Asia during Operation New Life, security police joined the ranks of the competitors in the eighth competition. This year's 23rd competition, conducted amidst a head-spinning collection of world events, will include four operations crews, four maintenance teams, a communications team, a civil engineering team, and a seven person security police team from each wing.

Although the environment and team compositions are vastly different from previous competitions, the objectives remain the same. From inception, the competition has provided us with the opportunity to polish our procedures, exchange our ideas, recognize our achievers, and share the glory of our successes as have victorious warriors throughout history. The result is a more efficient and knowledgeable team, proud of their accomplishments and rededicated to the profession of war, the providing of peace.

Maj Gen J.A. Borling
Deputy Chief of Staff, Operations

Granted, only a handful can make the trek to space and missile country and experience first-hand the euphoria of competition. Only a team of 28 can feel for themselves the anticipation during the familiarization briefings, the rush of adrenalin as each exercise begins, and the thrill of holding the Blanchard Trophy aloft, on stage, at the conclusion of score posting.

Those who enter the arena compete not only for themselves but for all who remain. Each bolt tightened, each round fired, and each keyturn is done with the realization that these actions represent the capabilities of all the warriors back at the wings. Their efforts attest to the levels of dedication responsible for our saga of professionalism, our history of peace.

As we converge upon Vandenberg in these turbulent times of change let us remember why we serve and compete in the words of Captain Robert A. Wyckoff's Missileer— "For duty, honor, country and a matter of self-pride."

Good luck to all competitors as you strive to write your own chapter in the "deterrence-rich" ICBM history. ★★

SAC MISSILE COMBAT COMPETITION
SAC'S YEAR OF REVIEWING FUNDAMENTALS
1990

Olympic Arena '90

Maj Michael G. Glaspy
HQ SAC/DOMM

The tasks are selected. The exercise scenarios are ready. The teams are chosen. Plans and arrangements throughout a vast array of areas by people at all levels of the command are nearly complete. Hundreds of people at Vandenberg, six strategic missile wings, Eighth and Fifteenth Air Force Headquarters and here at SAC are busily preparing for the biggest annual assemblage of the command's ICBM community — the 1990 SAC Missile Combat Competition, the premier missile event in Strategic Air Command.

Nicknamed Olympic Arena, this competition will begin on 10 May 1990 and will involve selected missile combat crews and maintenance, communications, security police, and civil engineering teams from SAC's six ICBM wings. In all, 168 competitors, 28 men and women from each wing, will put their knowledge, skills and experience on the line in spirited, intense, yet friendly competition to prove which wing can best collectively combine their individual efforts to bring home the silver — the coveted Blanchard Trophy — awarded to the "Best Missile Wing in SAC."

Each wing will be represented by four missile combat crews at Olympic Arena. To allow crew members an equal opportunity to compete, each unit selected two of their crews and the SAC Deputy Chief of Staff for Operations randomly selected the remaining two crews. Each crew will complete one scored, ninety-minute "warfighting" exercise in the missile procedures trainer, the launch control center simulator. This exercise will contain routine alert actions, emergency situations, malfunctions and execution events designed to test each crew's overall knowledge and decision-making abilities. Each exercise will be worth 300 possible points, resulting in a combined total of 1200 points for each wing's operations team.

In maintenance, teams from four different shops will form each wing's composite maintenance team. The individual teams include a two-person pneudraulics (PNEU) maintenance team, a two-person electro-mechanical team (EMT), a two-person power-refrigeration-electric (PREL) team and three-person munitions (MUN) team.

Each of these teams will compete in either an in-shop or on-site exercise that requires them to troubleshoot and repair or replace a component or piece of equipment within their specialty. Each team will strive for a possible 300 points in their respective exercise, resulting in a combined total of 1200 possible points for their wing's composite maintenance team.

In the communications area, each wing will be represented by two technicians from the missile radio workcenter. These technicians will perform an in-shop exercise to bench check and repair an UHF transceiver. This single communications exercise is worth 200 possible points.

The fourth area of competition during Olympic Arena involves the security police element. A seven-person team will represent each wing and will compete for a total of 300 points. Security police competitors will participate in a two-phase tactics exercise, a combat marksmanship course, and the confidence course. The two-phase tactics exercise will include a technical phase and a tactical scenario, representing realistic situations that missile security forces may encounter in the field. This year, three of the seven security police competitors from each wing were randomly selected by HQ SAC. Each wing's security police team will vie for a total of 300 points.

Finally, a two-member team will represent each wing in the civil engineering area of the competition. This two-person team will repair and check out the launch facility "C" rail in a single 200 possible point exercise.

Through the combined efforts of these 11 individual teams, each wing will have 3100 possible points at stake. While only one missile wing will be fortunate enough to win the coveted Blanchard Trophy, each wing reaps benefits from the competition. Olympic Arena provides the impetus to improve the readiness and responsiveness of each unit and individual. Through increased training, all competitors will improve their knowledge, skills and expertise in weapon system operation, equipment troubleshooting techniques and security response tactics. In addition, competitors will develop and test innovative techniques, procedures and equipment with the expressed goal of "finding a better way." Olympic Arena will serve as a test-bed for these innovations to determine if they can be applied force-wide.

Through team interaction, competitors will broaden their knowledge and understanding of the other functional areas and how those areas relate to and impact their own area of expertise. This interaction not only expands knowledge, but also builds spirit and the foundation for a unified, wing team effort in competition.

But it's not only the competitors who realize these benefits. The increased knowledge and understanding gained by competitors is passed on to the rest of the wings' crew members, shop and security police personnel through training programs. In turn, the wings realize benefits as all personnel improve their proficiency, increase their effectiveness and evolve into a cohesive, unified fighting force.

Olympic Arena, over the years, has meant many things to many different people. Its meaning to the command, however, has not changed. SAC knows that competition enhances overall capability of the individual and command to perform the primary mission. Olympic Arena is a show of spirit, a demonstration of our warfighting abilities, and a belief by every participant that they have not only the ability and desire to win, but will win if ever called upon to defend our great nation. It is through this will and desire that the command gains. **Good luck and may the best wing win!**

"HERE'S THE KEY, ITS PARKED IN HANGAR 13! TOP OFF THE TANK WHEN YOU TURN IT IN..
HANGAR 13

Rent-A-Buff

...one of the last good deals in the Air Force

Capt George R. Gagnon
31 TES, Edwards AFB

When most people think of Edwards AFB, their minds conjure up images of Test Pilot School, "The Right Stuff," Chuck Yeager, and other exotic aeronautical firsts. The SR-71, the F-15, F-16, A-10, B-1B, and surprisingly, the B-52 all evolved at Edwards.

The venerable B-52, workhorse of the SAC bomber force, has been continuously flight tested at Edwards for more than 30 years. Recently, test programs on the B-52 Offensive Avionics Systems (OAS) integration, Strategic Radar, Air Launched Cruise Missile (ALCM) Common Strategic Rotary Launcher (CSRL), OAS Block II, B-52G Global Positioning System (GPS)/Convention Weapons Integration (CWI), and SEEK EAGLE have had a major impact on mission capability, longevity, and combat readiness. Several other B-52 programs currently being flight tested at Edwards will increase the strategic and tactical capability of the B-52 fleet.

Flight testing is a challenging, tough, and demanding way to fly. Eighty percent of the B-52 flight testing at Edwards is accomplished by SAC pilots and navigators—guys who came from units. A typical test flight profile simulates the "standard" SAC sortie profile. The air alignment is dictated by testing needs and requirements. Low level generally consists of five or more hours in the Utah Test and Training Range. We rarely get air refueling and never do pattern work on a test mission.

Because our mission is testing, our "operational" exposure is heavily dependent upon flying "operationally representative" missions. The B-52s assigned to Edwards AFB are not completely representative of SAC operational B-52s and, as such, are unique "one-of-a-kind" aircraft. The Edwards birds are modified to meet the specific needs of the applicable test programs. Commonly, the AFSC B-52s at Edwards are used for various ground tests by contractors doing test support. In order to retain our "operational" mindset, our "operational" flying skills, and "operational" capabilities, we "Rent-A-Buff."

The Rent-A-Buff program is one of the last truly good deals left in the Air Force. The Rent-A-Buff B-52 sent to Edwards permits us the opportunity to get back into the "operational" cockpit. We typically use a Rent-A-Buff to fly four three-hour pilot pros. Often we will make one or two of our Rent-A-Buff sorties a mission encompassing air refueling, a SAC low level, and two hours of pattern work. This may seem relatively mild in its relationship to the average SAC sortie. Considering the infrequent number of Rent-A-Buff sorties, we fly four sorties per month on the average split among eight pilots and seven navigators. Our limited exposure to a B-52 makes these sorties challenging.

The real benefits of the Rent-A-Buff program are twofold: those of us at Edwards get to shake out the "operational" cobwebs, regain currency in various events (e.g., air refueling, low level, TA, etc.); but for the crew from base X, it's a good deal.

Edwards AFB is ideally located 90 miles from Los Angeles, 180 miles from Las Vegas, 180 miles from Yosemite and Kings Canyon National park, 90 miles from San Bernardino, and 120 miles from the beach or some of the best ski slopes in California. When the Rent-A-Buff crew arrives at Edwards, we provide transportation and billeting. We ask the SAC bomb wings to provide an airplane. We pay for the TDY—rental cars, billeting, per diem—for up to eight people. We pay for the flight time when we use it. We fix it if we break it and often fix it if you break it. The crew that comes in to Edwards gets the red carpet treatment in America's playground.

An off-station training sortie is not a Rent-A-Buff. The B-52 does not meet the Rent-A-Buff Maintenance Operating Agreement (MOA) criteria. Special support to the Air Force Flight Test Center is not a Rent-A-Buff for the same reason. Only sorties coordinated and funded through the Strategic Systems Combined Test Force Current Operations shop in accordance with the Rent-A-Buff MOA qualifies as a Rent-A-Buff. If it's not a Rent-A-Buff, we cannot touch the airplane.

The costs to the wing is small compared to the dividends SAC receives. We thank those who have supported us with their aircraft and crews. We look forward to continuing our rapport with you for many years to come. SAC helps us maintain proficiency at Edwards, so we may continue to serve SAC (your) needs. Rent-A-Buff guarantees that.

Fame's Favored Few

92nd Bombardment Group (Heavy)
92nd Bomb Wing

A. T. Lloyd
Editor, Boeing Airliner Magazine
National VP Northwest Region – Air Force Association

Mary was B-17G-80-BO 42-38156, coded JW-E, carrying the 92nd BG's triangle C and 326th BS yellow tail band.

The 92nd Bombardment Group (Heavy) was constituted on 28 January 1942, and activated at Barksdale Field on 1 March 1942. The group consisted of the 325th, 326th, 327th and 407th Bomb Squadrons. The 92nd trained in Boeing B-17 Flying Fortresses while stationed at MacDill Field, FL, from 16 March 1942. Sarasota, FL, was home for the group between May and July 1943. Flying antisubmarine patrols off the Florida coast was part of the training, earning the group the Antisubmarine, American Theater Campaign medal. The Group's motto was: **Fame's Favored Few.**

The 92nd BG deployed to England during July and August 1942. The air echelon departed on 19 June, making stops at Westover AB, MA, and Dow AB, ME, before heading across the Atlantic. Newfoundland was the last stop before making landfall at Prestwick, Scotland. The 92nd BG was the first bomb group to make this nonstop transatlantic flight to the United Kingdom. Bovingdon, England, was the first station for the 92nd BG. They occupied this base between mid-August 1942 and mid-January 1943.

Early Battles

On 6 September 1942, the Eighth Air Force's 1st Bomb Wing dispatched one squadron of Douglas DB-7s (equivalent to the A-20 Havoc) and three groups of B-17s against enemy air installations in France. This marked the first mission for the 92nd, as 24 of their B-17s attacked the aircraft factory at Meaulte. One 92nd bomber was lost and another two were damaged.

Two elements of the 92nd BG were to fly diversions for the 97th and 301st BGs on 26 September 1942. The only effective aircraft were from the 92nd BG. The 301st was recalled because they could not rendezvous with the fighters. Clouds obscured the target for the 97th, and a miscalculated tail wind caused that group to fly home over the Bay of Biscay.

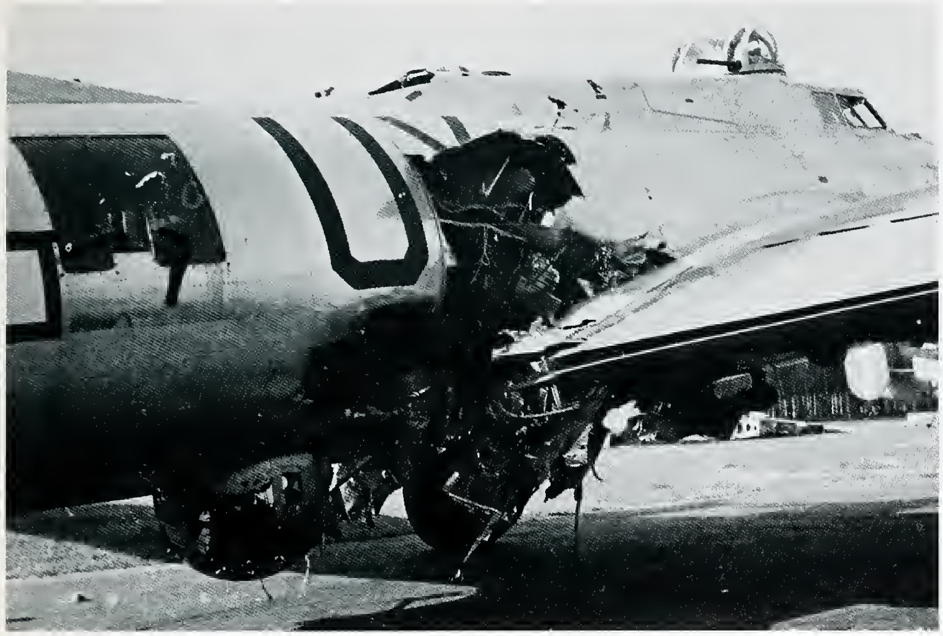
Formation flying with heavily loaded bombers was no easy chore; however, tight formations concentrated their defensive firepower. The 9 October 1942, mission to St. Omer/Longuenesse and Lille had a rough beginning for the 92nd. While over the English Channel 20 miles west of Dunkirk, one B-17 rose into the aircraft above. The vertical fin damaged the right wing and two engines on the second ship. The pilots of the first aircraft managed to regain control and returned to base with their crushed tail. The second aircraft jettisoned fuel and its bomb load and was able to make an emergency landing in England. This marked the last combat mission for the 92nd BG until 14 May 1943.

Combat Crew Replacement Training

The 92nd was given the assignment to train replacement combat crews within the VIII Bomber Command. The group moved from Bovingdon to Alconbury during early January 1943. While providing training, the 92nd BG was redesignated the No. 11 Combat Crew Replacement Center. War-weary B-17Es were assigned to the unit.

YB-40 Bomber Escort

Early bomber operations in the European Theater revealed the vulnerability of the bomber formations to frontal fighter attacks. The escort fighters employed early in the war did not have the requisite range to support the bombers all the way



This 327th BS Fortress made it home with a large hole in the radio compartment.

Stripped of her armament, this B-17G-95-BO 43-38832, served as a transport for the Green Project.

to the target and back to base. Hence, schemes were devised in which fighters would escort their big brothers as far inland as possible, and then mount a second mission to help the limping bombers home. Early attrition rates for the Eighth Air Force approached 400% –a figure completely unacceptable to American bomber commanders, and one which raised the eyebrows of the RAF with regard to the merits of daylight precision bombardment.

Numerous solutions to the problems of inadequacy in the bomber's defensive armament were attempted. Examples included the installation of extra nose guns and a 20-mm cannon replacement for the nose gun.

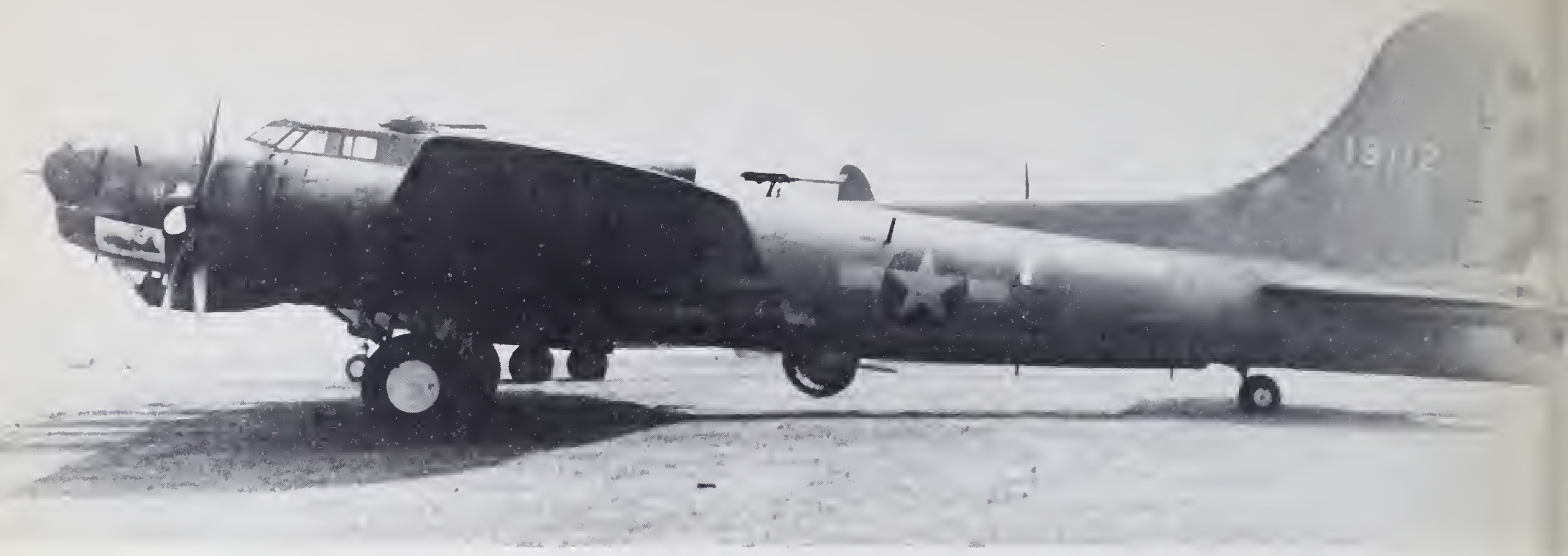
Maj Robert J. Reed, 92nd armament officer, directed the modification of a B-17E named Dreamboat. Consolidated Aircraft hydraulically-operated turrets were added to the nose and tail. A powered twin .50 caliber machine gun was added to the radio compartment. The Sperry top turret was replaced by a Martin turret (as employed on the B-26 Marauder) saving 120 pounds and affording the gunner a seat. The bombardier/navigator duties were combined into a single crew position. When the aircraft was flown to VIII Bomber Command bases for comments, it was photographed by German reconnaissance aircraft, misidentified as the YB-40, and was thought to have had no less than 25 guns! The program was terminated because late-model B-17Fs and B-17Gs were already in production and these too were destined to be replaced by the B-29s.

A prototype escort bomber, the XB-40, was developed by Lockheed-Vega. A six-day flight test program was conducted at Eglin Field, FL, in November 1942. Conversion for the 13 YB-40s was conducted by Douglas-Tulsa, utilizing the Lockheed-Vega engineering. The aircraft were modified to incorporate a remotely-fired chin turret (as would appear later on B-17Gs), a powered Martin turret in the radio compartment, twin powered guns in the waist, and twin powered guns in the tail. Ammunition was increased from 1,600 rounds to 10,700 rounds. Tactical suitability tests were conducted at Orlando AB, FL, in April 1943, using three YB-40s and a pair of B-17Fs.

The 13 YB-40s, under the command of Maj Robert B. Keck, who previously had been involved in armament testing in England, flew to Alconbury in late April-early May 1943. One aircraft crashed in a Scottish peat bog. The remaining 12 aircraft were assigned to the 327th BS, 92nd BG.

The first combat mission employing YB-40s was flown against the U-boat pens at St. Nazaire, on 28 May 1943. One YB-40 flew as right wingman on the 305th BG lead ship; while a second YB-40 took up the same position with the 92nd BG. The remaining six YB-40s comprised the low squadron for the 92nd; making them the low squadron for the lead combat wing. One YB-40 returned early due to a lost supercharger. While a total of eight B-17s were lost by the 1st BW, none were YB-40s.

After only nine missions Lt Col William C. Ried, 92nd BG commander, submitted a report to VIII Bomber Command citing its deficiencies. The only two positive recommendations were that future B-17s sent to the ETO should be equipped



Dreamboat was B-17E 41-9112 which was modified in desperation for Project Reed in an effort to combat the devastating frontal attacks employed by the Luftwaffe.

with chin turrets and staggered waist gun positions. A total of 14 combat missions were flown by the YB-40s; the last being on 28 July 1943.

Medal of Honor

Six bomb groups from the 1st and 4th Bomb Wings dispatched 121 B-17s against the railroad industry at Hanover, on 26 July 1943. Ninety-six of the bombers were effective and 16 were lost. Three of the 17 attacking 92nd BG aircraft were lost. 1Lt Robert L. Campbell was the pilot of Ruthie II, B-17F-70-BO 42-29802, code JW-C, from the 326th BS, 92nd BG. His copilot was Flying Officer John C. Morgan. Just before reaching landfall, a frontal attack by an FW 190 resulted in a bullet striking the pilot in the head. Instinctively he grabbed the control wheel. Morgan wrestled with both the injured pilot and the aircraft attempting to maintain formation for maximum protection. Morgan got no response over the interphone and continued with his own battle.

The top gunner, SSgt Tyre C. Weaver, was hit in the left arm just below the shoulder. He slid down into the nose compartment and was immediately rendered first aid by the navigator, 2Lt Keith J. Koskie. A bent needle prevented the injection of morphine, and the proximity of the wound to the shoulder precluded the application of a tourniquet. Lt Koskie knew that the gunner needed immediate medical attention. He adjusted Sgt Weaver's parachute and eased him out of the hatch. Several weeks later, word got back to England that Sgt Weaver was recovering in a German hospital.

Morgan continued the bomb run still fighting the wounded pilot. Only after Ruthie II was 15 minutes back out from the enemy coastline did Lt Koskie leave his position to see how the rest of the crew was doing. Koskie took Lt Campbell into the nose compartment where the bombardier kept the pilot from falling out of the open crew hatch. Lt Koskie went aft to find the unconscious gunners stricken with frostbite.

F/O Morgan landed the B-17 at RAF Foulsham. For his action, John C. Morgan was awarded the Medal of Honor. As a postscript, Morgan wanted to continue flying and was transferred to the 482nd BG where he served as a pathfinder instructor. One day he conned his boss into letting him fly one more combat mission. He went down on the 6 March 1944 Berlin mission and became a guest of the Luftwaffe.

Schweinfurt

The date of 17 August 1943, marked a day of infamy for the VIII Bomber Command. On that date, the 4th BW, under the command of Col Curtis E. LeMay, dispatched 146 B-17s in seven groups against the aircraft industries at Regensburg. The aircraft were over the target around noon and recovered in North Africa. A total of 24 of the 122 effective aircraft were lost.

Weather held the 1st BW down during the morning and the element of surprise was lost. Of the 230 B-17s dispatched, Brig Gen Robert B. Williams had 188 over the target. A total of 36 B-17s were lost from the 1st BW. Of the 21 effective B-17s from the 92nd BG, two from the 327th BS were lost due to enemy fighter activity.

Other Missions

The 92nd was awarded the Distinguished Unit Citation for its action on 11 January 1944. The target was the aircraft factory at Oschersleben.

Operation Big Week was the all-out attack on the German aircraft industry between 20-25 February 1944. A summary of the 92nd BG action follows:

Date	Target	Dispatched	Lost
20 Feb	Leipzig	10	1
21 Feb	Hopsten	20	2
22 Feb	Aalborg	20	2
24 Feb	Schweinfurt	30	3
25 Feb	Stuttgart	10	2

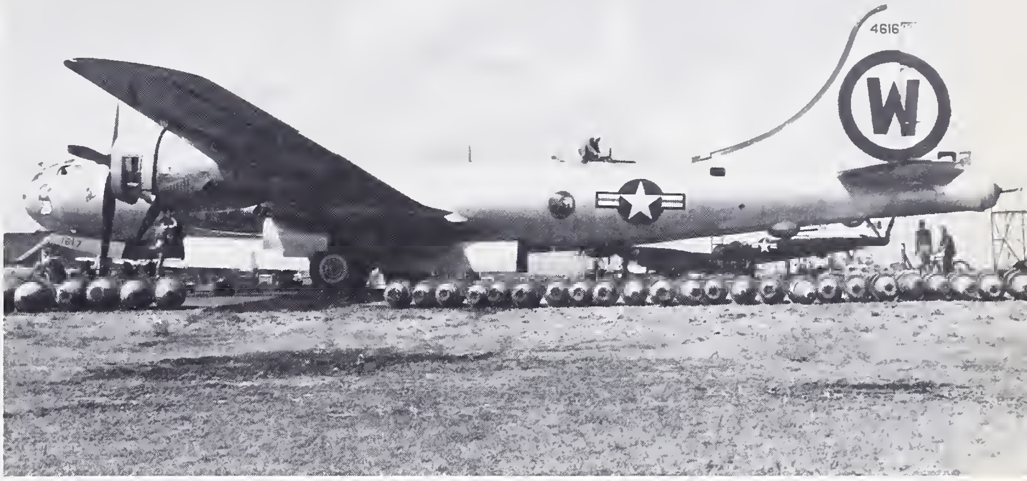
On 6 March 1944, a major attack was launched against Berlin. The target for the 1st Bomb Division was the VFK Ball Bearing Works. The lead box of the 40th Combat Wing consisted of one Pathfinder and 20 B-17s from the 92nd BG. The high box consisted of 14 aircraft from the 92nd BG and seven from the 206th BG. Effective over the target from the 92nd BG were 16 in the lead box and 11 in the high box. The 92nd BG lost four aircraft –two to flak and two to fighters. Seventeen other B-17s from the 92nd BG returned to base with light or moderate damage.

The 92nd BG attacked V-weapon sites in France; airfields in France, Germany and the Low Countries; and industrial targets in France, Germany and Belgium. The group supported the Allied invasion at Normandy and during the St Lo Breakout. After October 1944, the group concentrated its efforts on oil and transportation facilities. During December 1944 – January 1945, the 92nd BG participated in the Battle of the Bulge. The group bombed airfields near the landing zone, providing cover for the airborne assault across the Rhine River in March 1945.

A high-powered weapon was developed by the Royal Navy for use against U-boat and E-boat shelters. This 4,500-pound bomb was equipped with a rocket motor which ignited when it reached an altitude of 5,000 feet. When no British aircraft was found to be capable of carrying this 14-foot long weapon, the 92nd BG was tasked with pioneering the use of the Disney rocket bomb. On 14 March 1945, nine B-17s from the 92nd BG were effective using this weapon against an electrical power station at Ijmuiden.

Seven aircraft from the 92nd BG were dispatched to Pilsen on 25 April 1945. The 92nd sustained one loss during this mission on which they led the VIII Bomber Command on its last day of combat during World War II.

During its tour with the Eighth Air Force, the 92nd BG flew 308 missions and was credited with 8,633 sorties. They dropped 20,829.4 tons of bombs. The 92nd BG lost 154 aircraft and claimed the following enemy aircraft: 206 down, 42 probable, and 89 damaged.



This B-29A-40-BN, 44-61617, was being prepared for a mission over North Korea in 1950. The later Circle W marking was for the 92nd BG. The carton character on the nose indicates that the aircraft was from the 327th BS. A map of korea was carried on the noses of many of the aircraft.

Green Project

Following the hostilities, the 92nd BG was assigned to the Green Project, in which they helped redeploy U. S. troops to seaport staging areas. While the parent group was stationed at Istres,France; the 327th BS operated out of Port Lyautey, French Morocco. During this operation, the 92nd BG was credited with the movement of 19,935 U.S. troops to Casablanca while ferrying 5,672 Frenchmen to France. Also, displaced Greeks were flown from Munich to Athens. The 92nd BG was inactivated in France on 28 February 1946.

Post World War II

The 92nd Bombardment Group (Very Heavy) was activated at Ft. Worth AAFld, TX, on 4 August 1946, and equipped with Boeing B-29s. Only the 325th, 326th and 327th BSs were reactivated with the group. At this time, still part of the U.S. Army Air Forces, the 92nd BG was assigned to the newly formed Strategic Air Command. The group moved to Smoky Hill AFB, KS, on 19 October 1946. Then on 20 June 1947, the 92nd BG was reassigned to Spokane AAFld, WA. On 28 May 1948, the unit was redesignated the 92nd Bombardment Group (Medium).

The 92nd BG was one of five B-29 bombardment groups and one RB-29 reconnaissance squadron to be called into action for the Korean Conflict. Yokota AB, Japan, was the Forward Operating Location for the 92nd BG between 6 July –25 October 1950. During its stint in the Far East, the 92nd BG was credited with flying 836 sorties and dropping 33,000 bombs weighing a total of 7,500 tons.

In September 1950, Spokane AFB was renamed Fairchild AFB in honor of General Muir S. Fairchild, Vice Chief of Staff, USAF, who was killed in a B-36 accident on 17 March 1950. Dedication ceremonies took place in July 1951.

B-36 ERA

On 5 January 1951, a major reorganization impacted the bases belonging to SAC. At this time the air base group would be subordinate to the flying wing. Hence, the 92nd BW superseded the 92nd BG in hierarchy.

The first Consolidated B-36 Peacemaker arrived at Fairchild AFB on 29 July 1951. All three squadrons would be equipped with these giant bombers.

The 92nd BW took part in Operation Big Stick, an exercise designed to test the capabilities of the B-36 in a long distance flight. Between September-October 1953, aircraft from the unit made the first mass flight to the Far East, making stops in Japan, Okinawa, and Guam. This 30-day exercise came shortly after the end of hostilities in Korea; thus demonstrating America's determination to use every means possible to maintain peace in the Far East.

The fifth SAC Worldwide Bombing and Navigation Competition was held between 25-31 October 1953. Points earned by the 92nd BW with their B-36s netted them the Fairchild Trophy given for the best overall bombing and navigation score.

B-36s from the 92nd BW made a 90-day deployment to Andersen AFB, Guam, between October 1954 – January 1955. For Operation Crosswind, the 92nd made another 90-day trip to Andersen AFB.

B-52 Era

During Operation Big Switch, the 92nd BMW underwent a major transition between 1 October 1956 – 15 October 1957. The B-36s were phased out and replaced by B-52 Stratofortresses. The first B-52D arrived on 26 March 1957, and the full

As a show of force, B-36s from the 92nd BG made several deployments to the Pacific after the Korean Conflict.

complement was on station by 22 September. All three squadrons were equipped with the bombers.

A new arrival, on 1 January 1957, was the 92nd Air Refueling Squadron (AREFS), which brought its KB-29s from Bergstrom AFB, TX.

The 92nd AREFS transitioned into the KC-135A Stratotanker between 21 February – 11 September 1958. On 17 September 1958, just six days after becoming operational, an aircraft from the 92nd AREFS established four world records:

Unrefueled closed circuit distance 3,125.56 st. mi.
Speed for 2,000 kilometers 589.287 mph
Speed for 5,000 kilometers 587.136 mph
Closed circuit with 2,204.6, 4,409.2, 11,023, and 22,046 pound payloads

Missiles Too

Greater emphasis was being placed on the use of intercontinental ballistic missiles (ICBMs). Construction began in April 1959 for an Atlas ICBM launch complex around Fairchild. The 567th Strategic Missile Squadron (SMS) was activated on 1 April 1960, and assigned to the 92nd BMW. By September 1961, all nine of the missile complexes were completed. In March 1962, the wing was redesignated the 92nd Strategic Aerospace Wing (SAW), in light of its changing role.

The 567th SMS remained operational until 25 June 1965.

The B-52s also got missiles, the North American AGM-28B Hound Dogs. The first AGM-28 arrived aboard a Douglas C-133, on 2 November 1961. One missile was carried under each wing root of the B-52s. The Hound Dogs were unique in that they could provide extra thrust for high gross weight takeoffs and then be topped off with internal fuel carried aboard the B-52. The missiles were designed to provide enhanced penetration capabilities for the bombers.

Organizational Changes

A major realignment took place in June 1960. The 327th BS was reassigned from the 92nd to the 4170th Strategic Wing, based at Larson AFB, WA. On 1 March 1961, the 92nd BMW lost the 326th BS which was reassigned to the 4141st Strategic Wing, stationed at Glasgow AFB, MT. These changes left the 92nd BMW with the 325th BS as its only remaining B-52 squadron.

The 92nd AREFS was joined by the 43rd AREFS on 4 April 1966. The 43rd AREFS, also equipped with KC-135As, had been stationed at Larson AFB, WA.

War in Southeast Asia

As a result of the Gulf of Tonkin incident, the 92nd SAW deployed its first tanker to Clark AB, Philippines, on 25 September 1964. As the war escalated during the early months of 1965, an air refueling task force, named Young Tiger, was established to support our fighter operations. Between March 1965 – March 1968, 47 crews and 25 tankers from the 92nd SAW participated in this operation. During four years of operation, crews from the 92nd SAW were credited with saving about 30 aircraft which otherwise would have run out of fuel and ditched at sea.

Operation Arc Light was the code name for heavy bombardment missions in Vietnam. The 92nd SAW began their participation in October 1966, with two bombers and three tankers on a 45-day rotation to Andersen AFB, Guam. Then, until March 1968, the 92nd SAW provided about 11 B-52s with 17 crews, and 11 KC-135As with 12 crews at 60-day intervals.

On 1 April 1968, the entire 325th BS and 43rd AREFS were deployed, with more than 1,000 support personnel, to Guam. They were tasked with the difficult role of close air support of Allied troops. Towards the end of the tour, the 92nd AREFS replaced the 43rd. Within six months, the bomber crews flew almost 2,050 sorties and logged 14,000 flying hours. They dropped approximately 50,000 tons of bombs over targets in Khe Sanh, Vinh Binh Province, and the A Shau Valley. Most of the wing had returned to Fairchild by 23 September; however some of the tankers continued their support.

Enemy activity increased again during 1969, and elements of the 92nd SAW returned as part of the 4133rd Bombardment Wing (Provisional). During this 189 day tour of duty, the B-52 crews flew 1,700 sorties while logging over 11,700 flying hours, and dropping 63,000 tons of bombs.

On 16 October 1970 the 92nd SAW transitioned from B-52Ds to B-52Gs. Using an all B-52G force, the 92nd was standing alert on 1 January 1971.

Operation Bullet Shot was organized in late May 1972, to counter a new communist offensive. Elements of the 92nd SAW were again deployed to Andersen AFB. (The wing was redesignated the 92nd Bombardment Wing (Heavy) on 1 July 1972.) The wing's one and only loss in the southeast Asia war occurred during a night time mission against Hanoi on 21 December 1972. The aircraft was lost over North Vietnam when it was struck by enemy fire. A crew in a following aircraft witnessed the explosion but did not see any parachutes. However, two names appeared on the North Vietnam Prisoner of War list. These crewmen were released after the war.

The 92nd BMW continued to fly Arc Light missions into Cambodia until recalled in the fall of 1973.

Training Continues

In order to meet the economic challenges of the late 1970s, the Accelerated Copilot enhancement (ACE) was instituted in 1978. The ACE program allows B-52 and KC-135 copilots to gain valuable flight experience as aircraft commanders in fuel efficient T-37 and T-38 trainers. Fairchild was one of two bases to inaugurate this program.

In 1978, the 92nd BMWs tanker force began supporting the U.S. Navy's A-6 training program which is based at NAS Whidbey Island, WA.

Between September 1985 – May 1986, the 92nd BMW transitioned into the B-52Hs. The wing has the honor of operating the last B-52 built — this being B-52H-170-BW serial number 62-040.

In July 1989, the 92nd BMW was tasked with a new mission known as A War at Sea, designed to improve individual and battle group readiness in a multithreat environment.

Record Breakers

On 27 October 1986, the 92nd BMW made history when they took nine of 11 possible trophies in SAC Worldwide Bombing and Navigation Competition.

This is one of several T-37As Tweety Birds which support the ACE program at Fairchild AFB.

There I Was...Again!

Lt Col James D. Teigen
HQ SAC/IGFF

Most of these stories start out with "There I Was" or some other quaint line, but I'll try a simpler approach...

To set the scene, it was during my first academic class in undergraduate pilot training. The instructor was standing there in front of us, as we filed into the classroom. Thinking back, his approach was great, as he first introduced himself and then went around the room and we were allowed to introduce ourselves.

His next action changed the course of my life or at least the next 18 years of it when he asked if we had any questions. There was one, about airsickness (but that's another story) then he said he had one for us.

The instructor said this was about him, about the time he flew with a head cold and why he'd never do that again. He showed one day with what he described as a stuffy feeling in his head but that he could clear his ears and one blow of the nose seemed to solve his problem. He later admitted that after blowing his nose, it was necessary to repeat the process more often than he cared to admit, using up most of the tissue in his immediate area.

Later, he was airborne on a simple T-37 instrument training sortie with a good student when it was time for them to return to base. During the descent he began having problems clearing his ears, when suddenly he was struck by an excruciating pain in his forehead. The pain was so intense that it caused his eyes to water. His instructions to his student took a back seat to his more immediate problem, pain. After admitting his problem to his student, they leveled off and the instructor attempted to clear his ears and his sinus cavities. This didn't work and after checking his fuel status and the weather at the home base, he called the supervisor of flying. After explaining the problem everyone agreed to have the student fly the aircraft home. The flight surgeon would meet them at the hammerhead.

The student probably got an "excellent" for the ride as he saved the aircraft and the instructor. Our instructor said the pain was some of the most intense he had ever experienced, so he was very happy to see the flight surgeon at the end of the runway. Relief was in sight, or so he thought.

At the clinic (this base was pre-hospital days) the flight surgeon did manage to get an X-ray of the sinus area and confirmed what the instructor knew. The diagnosis: sinus block of the upper sinus cavities (those above the eyes, under the eyebrows). The doctor also had some bad news, he couldn't treat the instructor there but a "quick" trip to Wolford Hall by ambulance would fix him right up.

The instructor related that they gave him some medicine that put him near "La-La Land" but he was aware of the trip to Wolford Hall. He also stated that Air Force ambulances are not good to travel in for approximately two and a half hours.

He remembered how happy he was to get to Wolford, and to be ushered into a comfortable doctor's office. It was nice and dark with a really nice chair in it for him, not too much different than a barber's chair. By now, the pain was down to a constant ache, nothing really sharp, but the pressure was there, and it wasn't leaving.

The instructor told us about how nice the doctor seemed and how softly he talked. He said the doctor told him to relax and close his eyes and rest after the long trip, he'd be right back to fix him up.

He said it was just a few moments, not more than a minute when hearing some movement behind him he realized that his arms were secured to the arm of the chair! His eyes opened just as a big orderly strapped his head to the headrest. Trapped! Terror filled him. This had to be a dream! He couldn't move but heard a drawer open behind him; someone was in the room with him.

He next heard the doctor's voice telling him not to worry, everything was all right. "Try and relax," he said. The instructor still couldn't see the doctor, but the noises were still coming from behind him, and he was secured to the chair by his arms and his head.

Imagine the terror in his eyes when the doctor appeared in front of him with a Black and Decker hand drill complete with a bit chucked down tight. "What are you going to do with that?" the instructor asked.

"Why, operate, my boy," said the doctor. Not surprisingly, the instructor began to scream. The instructor said the doctor calmly began to test the drill out. Buzz! Buzzzzzzzz! went the drill. "Yes, this will work just fine," the doctor said as he approached his patient.

Of course, by this time, every student in the room was twisting in his seat, wincing at the sounds of the

instructor imitating a running drill and repeating the haunting screams of "NO!"

The doctor told the instructor to be quiet or he would have to be gagged. He reminded him that this was for his own good, you shouldn't fly with a head cold, didn't he know that? The doctor then placed the drill in close proximity to his eyebrows. A swab of cold medicine was applied to his brow.

On came the drill, whirling and buzzing. The instructor closed his eyes. He had forgotten his sinus block pain but it was all coming back to him, the pressure, the pain, the ache, as the drill began to slow down its speed.

It was definitely sickening — the noise, the vibrations, the smell. Oh, the smell! He opened his eyes and saw the drill whirling, buzzing, vibrating within an inch of his right eye.

Suddenly, the drill increased in speed. Finally, the doctor removed the drill from the instructor's head and a spray of sinus, mucous, and blood erupted from his forehead.

His screams changed from "Nooooo," to "Do the other one, do the other one." The relief was that great, that quick, he said.

The doctor completed the procedure, and the instructor was told that the recovery period was eight to ten weeks. Bones needed to heal, skin needed to grow, but barring any other stupid moved on the part of the instructor, he would recover and continue his flying career.

The instructor paused and then asked the emotionally exhausted class if anybody doubted his story. There was one "Doubting Thomas" who volunteered to come forward to feel the indentations in the instructor's brow, one on each side. The student quiveringly allowed they were there. We were convinced. The instructor closed with one thought, as he said he knew we would come up on a day when we would be faced with flying with a head cold or going to the flight surgeon. He hoped his story would spur us to go to the flight surgeon. "Get well, fly healthy, and fly safe. Some of you will cheat the system, and probably never had a problem. But how lucky do you feel?" He admitted that he had felt the same way before, but now he vowed never to do it again. It was not fun.

I took his words to heart, even though I don't know if his story was the gospel truth. I'll never know. The guy in the class that felt his head — he believes.

Since then I've always cocked an ear toward my crew, and those who flew with us. I've listened for the repeated sniffles and other signs of a cold. I've since known fellow aviators who fly with a head cold and have gotten a sinus block. It's not worth it. Go to the flight surgeon, get well, **fly healthy, fly safe.**

U–2 Dollar Rides

HQ SAC/DORS

There you are in your aerospace vehicle, soaring along with the eagles, doing what you love to do. Today, however, there's a difference...a passenger. Not just any passenger, but a VIP. Last week you got tapped by the DO to give General X or Congressman Y or Mr Z an orientation flight in your aircraft. You get the typical briefings on how important the VIP is and how you should follow the rules and carefully brief the flight...you know, the carefully phrased and unspoken warning that the future of the command is in your hands and you'd be wise to do your best to preserve it.

The morning before the flight, you carefully review the mission plan with the crew and brief the VIP. Carefully, you cover the egress plan for the VIP so that he's comfortable with escape procedures. Now you're ready. Out to the crew bus, load the plane, start the engines and you're off, confident you and your crew are ready. But are you? You carefully briefed the VIP on what is expected of him, but what about the crew. Do they know what to do in an emergency if they're not in their normal position? Are responsibilities clearly assigned for quickly getting to switches now blocked by a totally unfamiliar individual. Is there a plan for getting everyone back to their proper position quickly and safely? Most importantly, have you briefed yourself on the most important rule of all. Maintain aircraft control! With a VIP in the seat, it's too late to start wondering how to take care of an engine fire after the warning light comes on. The last thing you need is a mad scramble to shift seats while flailing hands or elbows hit the trim switch or the autopilot disconnect button. In the confusion of that few seconds, a loss of aircraft control or failure to take the correct action could vastly complicate the problem.

Anytime a nonqualified individual occupies a seat in the cockpit, you ought to have a well defined plan in mind to deal with unusual circumstances. If possible, another crew member should be assigned to direct the passenger to a safe location so that the primary flight crew members can focus their attention on the immediate problem. Finally, make sure you know who's doing what to the aircraft. Several years ago a SAC crew was taking off out of Andersen at night and in a heavy tanker. A visitor (not a VIP in this case) was riding the jump seat...rated, but not a SAC crew member. Shortly after takeoff, they lost one engine. For the next few minutes, the pilots nursed the tanker through an incredibly long series of near stalls as the aircraft slowly accelerated but never seemed to be able to keep flying. Finally, the AC gained enough airspeed and control to begin to bring up the flaps. When he called for the flaps, the stunned pilots discovered they were fully retracted. The "helpful" visitor explained that he had been "milking them up" to help the aircraft gain speed. In the turbulent air and darkness, with the engine failure getting the bulk of their attention, the pilots had not noticed the passenger's nearly fatal "assistance."

Why, then, do we expose ourselves to this potential hazard? Why not discontinue "orientation" flights? Because they can be invaluable to our senior leadership and produce significant benefits. Sadly, many of us in "senior leadership" positions (loosely defined as 0-5 and above and out of the cockpit for a few years) no longer have up-to-date experience in today's cockpit environment. Missions have changed, cockpits have changed, weapons and tactics have changed, and equipment has changed. When we make decisions on tactics, strategy, funding, programming and training issues, we do it based on our past experience. Without current knowledge, those decisions are hard to make correctly. We need your help, we need your expertise, and we need your counsel.

As an example, the following letter was written by Major General James R. Clapper, Deputy Chief of Staff, Intelligence, Strategic Air Command. It speaks volumes as to the value of

keeping our leaders aware of life in the trenches.

"I recently experienced one of the most motivating milestones of my 27-year career — an orientation flight in a U-2 — and I thought I'd share some of my impressions with those who read this publication.

"I've spent my entire career in intelligence, and have been peripherally associated with U-2s since 1966, as a young intelligence staff officer at 7th Air Force Headquarters in Vietnam. Since then, serving in a number of official capacities, I've been an advocate, 'requirement stater,' funder, programmer, customer, etc., of the U-2 and its 'products.' Because of all that, I thought I knew a lot about the aircraft and its capabilities; but all that academic knowledge seemed to pale by comparison to the experience of actually flying it. In the process (if it were possible), I developed an even greater respect for those who fly, maintain and support the aircraft, and exploit its products.

"All the bureaucratic staff stuff came starkly to life in the human terms of the physiological and physical aspects of high altitude flight, the marvelous capabilities of the flight suit, the dedication and competence of everyone connected with the 9th SRW — from the youngest airman in the Physiological Support Division to crusty Tom Bowen (who is a great teacher) to the professionalism of the pilot, Capt Keven Riebsam, (whose patience with my 'non-rated' questions I'll never forget) and the technical competence of the intelligence officers and NCOs of the 9th RTS who expertly process the products — all simply superb!

Some 'snapshot' impressions: The psychological anxiety caused by the space suit (is all this plumbing going to work?) and its lack of freedom of movement, compounded by the close confines of the cockpit...the nimble takeoff, with a much faster rate of climb than I imagined...the tremendous view...the peace and quiet...looking way down on a 747 cruising at 35,000 feet...the most exciting landings I've ever experienced...the exhilarating feeling of satisfaction when I opened the canopy and climbed out...the admiration and respect for those who fly the U-2 so matter of factly.

"To Brigadier General Larry Mitchell, commander, 14th Air Division, an old friend and professional colleague, who first suggested such a flight to me — thanks for the ride of my life.

"I regard it as a singular milestone in my career — and I just wanted to pay a small tribute to those who made it possible; I'll never forget it."

One Little Error...

Maj Steven L. Slough
44 FMMS, Ellsworth AFB

The Universal Law of Synergism is absolute and irrevocable for all GIs. It's not written in any book or printed in the regulations, it's simply sewn into the uniform so it's always with you until you bid your country's service farewell. A GI might not recognize it by name but it's a sure bet he's experienced it or soon will. In this article I will try to define it and bring one experience with it to light.

The Universal Law of Synergism is the indisputable law that if you make an error, however small and insignificant, every individual you have ever met will also make an error and heap it upon yours until yours becomes of bone-crushing weight. The corollary of the law is your small error, now magnified beyond comprehension, will surface into everyone's view as if propelled by a rocket, while the errors of those around you sink slowly into the sunset without notice. One of the law's peculiarities is that experience proves there is no cure for the problem and the only solution is to stop the law from coming into play: that is to say, break the chain of errors. Let's take a look at the Universal Law of Synergism in action.

Long ago and far away there was an electro-mechanical team who inadvertently damaged some electronic equipment while starting up a missile site without the benefit of cooling air to keep the electronic equipment from overheating. In the estimation of most, this was a grievously dumb mistake since every missile maintenance technician is carefully trained to insure cooling air is present prior to electronic rack startup. Compounding the error, in the eyes of many, was the fact that technical data procedures clearly indicate the need for cooling air.

I was asked to determine how the unit to which I was assigned could produce a technician of such ability as to make such a seemingly dumb mistake. My other duties went by the wayside while I interviewed and investigated until I had a pretty good idea of what happened. The result of my inquiry reveals a classic example of the Universal Law of Synergism in action.

The beginning of the synergism started, as you might expect, with the training of the unfortunate team chief, Amn I. R. Guilty. Amn Guilty was trained in accordance with the accepted training procedures in use at that unit. However, because the task he was to perform on the day in question was complex, it had been broken into modules for training purposes. In essence, the task was never trained from the first step to the last. Rather, it was trained in individual, out of sequence modules, on different days. In addition, since total training on the task would require shutting down an alert missile site, the entire task was never trained "hands on." Amn Guilty had been trained on the first part of the module using a "talk through," rather than "hands on" method. Thus, in training he never experienced the conditions he met on the day of his error.

The second step in building synergism was the unusual condition of the site when Amn Guilty arrived. A previous maintenance team had performed a shutdown of the environmental control system including the emergency cooling air, a very rare action. When Amn Guilty arrived on site, he found it configured differently than any he had ever visited. Compounding the problem of unusual site configuration was the fact that a previous team had performed a portion of trouble shooting which includes restoration of the emergency cooling air. The team experienced problems that were later resolved. However, the problems distracted them from completing the restoration of emergency cooling air as called for in their technical order. Had they done so, Amn Guilty would have had a "safety net" that would have prevented his later problems.

Adding to the growing burden on Amn Guilty was his inexperience as a maintenance team chief. He had spent over a year working hard and reliably as a technician. In recognition of his growing abilities, he had, less than one month ago, earned appointment as a maintenance team chief. His new responsibilities included locating correct technical data procedures for the task at hand and directing the actions of his team mates. He inadvertently selected the wrong technical order module to begin the site startup — a fact related to inexperience and unusual site configuration.

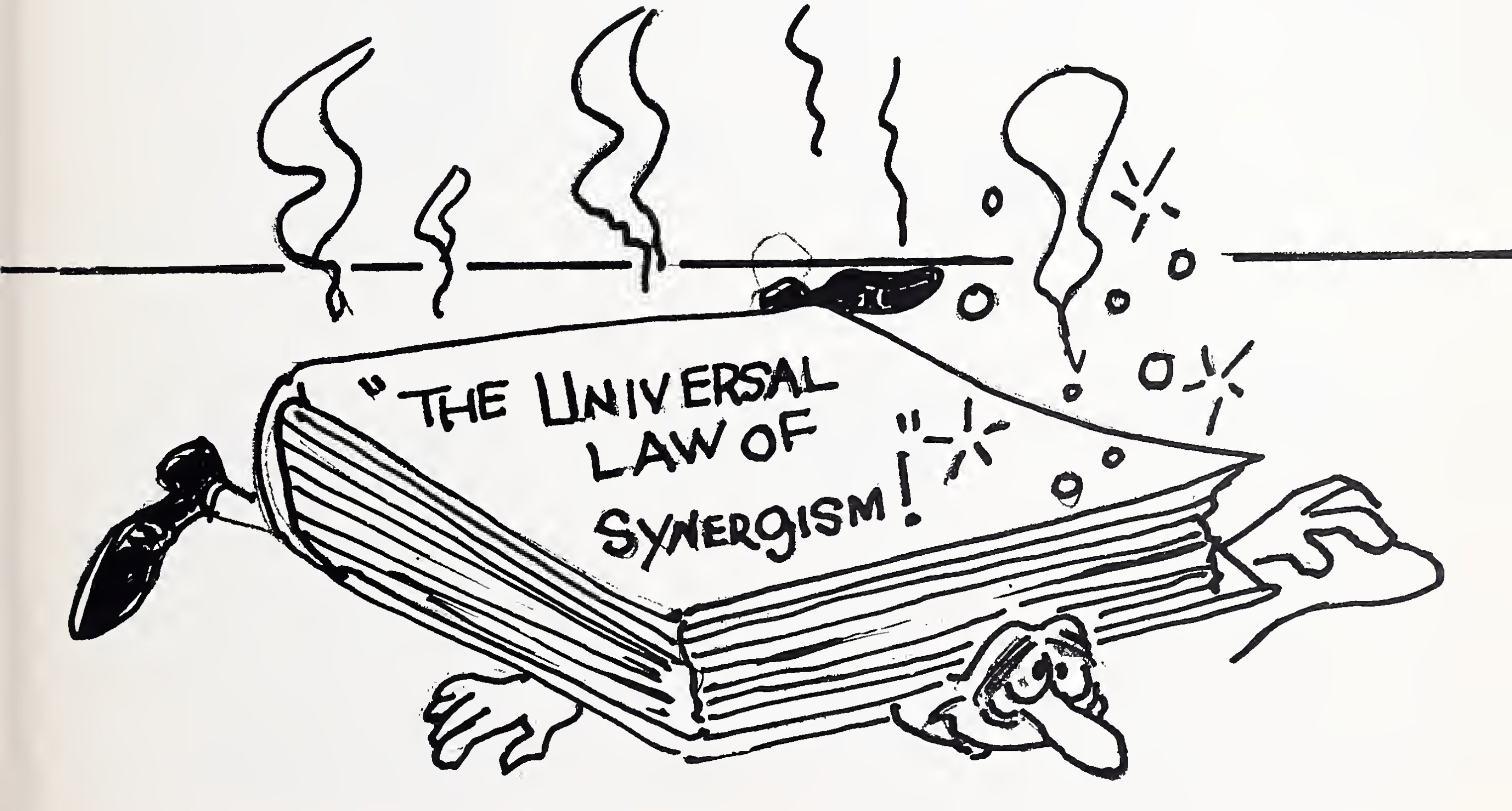
His inexperience contributed to one other missed opportunity to recover. The maintenance control function made extensive logs of maintenance actions conducted at this missile site. The site's chronic off-alert problem caused the log to swell to nine pages of handwritten memos. Amn Guilty reviewed these logs but was unable to recognize site status amid the "clutter" of background information. A contributing problem was the mislogging of the previous maintenance teams' actions. Their actions were logged as complete despite inadvertent failure to restore emergency cooling air.

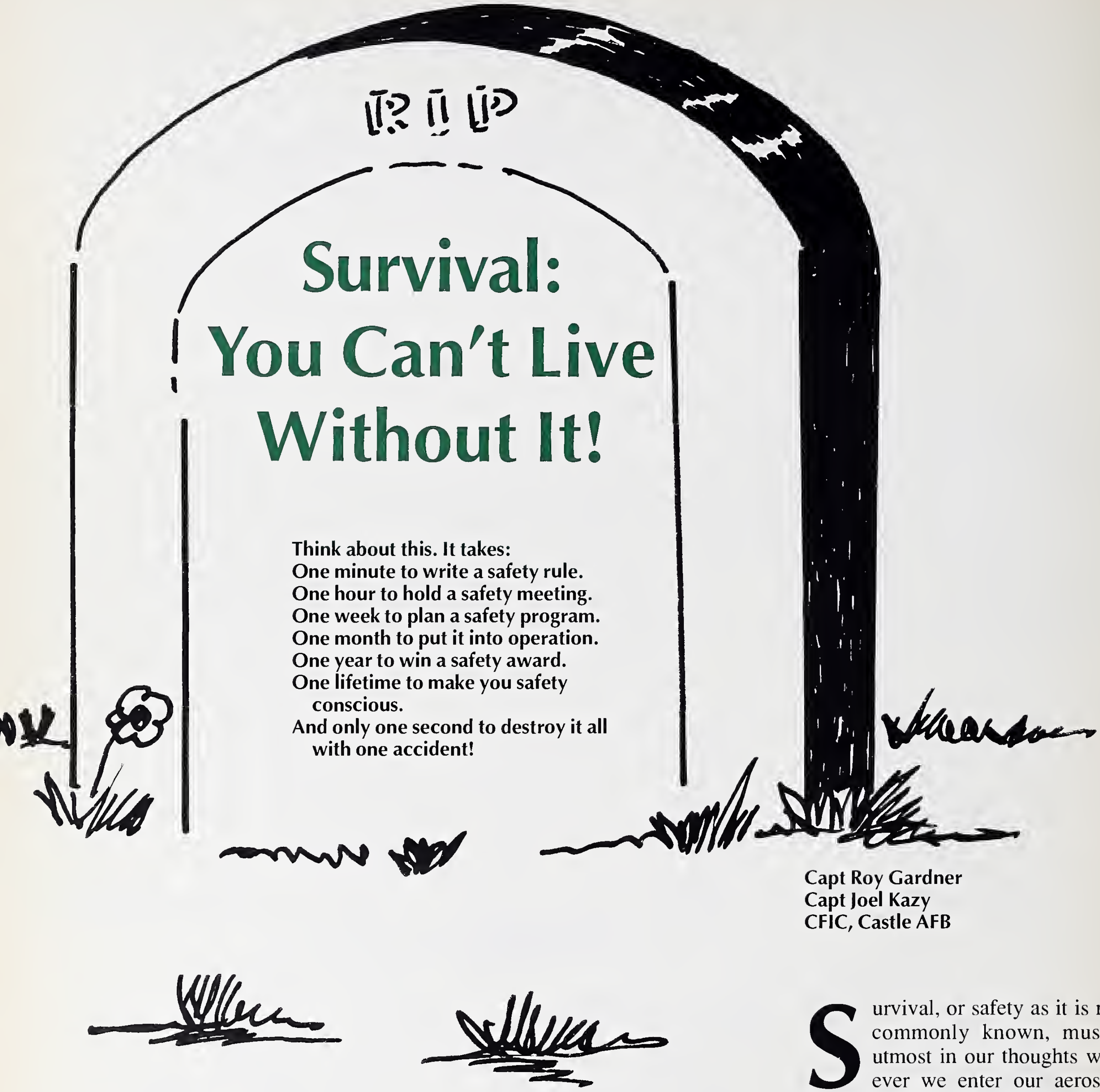
The next step in the synergism was the lack of technical proficiency of the field supervisor who joined Amn Guilty on site that day. The supervisor was a reliable, hardworking individual recently returned from years of duty in other weapon systems. Although a good supervisor, he was not technically proficient enough to recognize the significance of the out of ordinary site configuration. He was unable to prevent Amn Guilty's error.

The next complication was the presence on site of a second and larger maintenance team headed by a sergeant senior to Amn Guilty. The sergeant had a long, hard job to do and wanted to get started. His task could not start, however, until Amn Guilty performed his actions to restore site monitor power. Any opportunity that Amn Guilty might have had for careful reflection on site status and correct procedures vanished in the necessity of quickly getting the site to the configuration for the sergeant's team to begin work.

It was Amn Guilty's final error that resulted in equipment damage. His method of training, his inexperience, the unusual site configuration, the mistakes of previous teams, his unproficient supervisor, and pressure to get the job done combined to create a condition that he was unable to surmount. He did, in fact, choose the wrong technical procedure and performed site startup in the wrong sequence. It was, after all is said and done, one little error...

Amn Guilty's problem stands in my mind as a classic example of the Universal Law of Synergism in action. The benefit to be derived from Amn Guilty's experience lies in the recognition by supervisors and trainers of their ability to break the chain of error that creates the problems of Amn Guilty. That role demands perception and insight gained through experience and effort. **The payoff is in the prevention of one little error...**





Survival: You Can't Live Without It!

Think about this. It takes:
One minute to write a safety rule.
One hour to hold a safety meeting.
One week to plan a safety program.
One month to put it into operation.
One year to win a safety award.
One lifetime to make you safety conscious.
And only one second to destroy it all with one accident!

Capt Roy Gardner
Capt Joel Kazy
CFIC, Castle AFB

Survival, or safety as it is more commonly known, must be utmost in our thoughts whenever we enter our aerospace vehicle. The Air Force spends millions of dollars each year to provide us with the proper safety equipment. We can find any number of articles, lesson plans, regulations or pamphlets written on this subject; but only you can determine if you will do the right thing during an emergency.

It takes more than one short article in Combat Crew to cover every aspect of safety. However, we can identify some of the problem areas concerning safety and promote an active interest in accident prevention. The first step to improving your chances to survive an emergency is prior preparation. This can be accomplished before and during mission planning.

Preparation does not require a long lead time. A mental run-through of what to do immediately prior to the accomplishment of an emergency procedure is preparation. However, the longer the lead time, the better the preparation.

We can start mentally preparing prior to mission planning. One of the areas to start with is awareness of your emergency procedures as described in the aircraft technical order. Not only is it imperative that you know your own EPs, but having some knowledge of those EPs outside your normal duties could greatly enhance you and your crew's survival potential in a critical situation. Another area is the use and location of emergency equipment. An actual emergency is not the time to figure out the location of emergency equipment and how to use it. Finally, you must know your protective equipment. SACR 55-51 lists those items required for survival. Make sure you have the required equipment and know how to use it. For example, if you are flying in one of the instructor positions, make sure you know how to use the MD-4 survival kit ("soft pack"). Speaking of flying as an instructor, how can you determine if your student is proficient in the abovementioned items? Here are three methods that spring readily to mind — simulators, discussions, and tests. Let's look at each in turn.

The simulator is an excellent tool to determine proficiency because of its ability to pose emergency situations we can't practice airborne (and of course, we can always freeze the trainer and reset it). The Weapons System Trainer has the greatest capability but don't forget the CPT, T-4, etc. The next method is discussion, obvious perhaps, but extremely effective and inexpensive (that's important in this time of austere budgets). As an instructor, a well referenced discussion with your student on EPs will pay big dividends inflight. As a crewmember, a discussion with others in your specialty and in other specialties will lead to a better understanding of emergency procedures. Last but not least, the old reliable — tests — every crewmember's favorite. You may want to write your own questions instead of the standard CEVG tests, maybe even develop essay type situations. The bottom line is know what tools are available to you and use the appropriate ones.

Now, what about preparing on mission planning day? Crew coordination was found to be the determining factor in many SAC mishaps. Ensure every member of the crew knows exactly who is going to do what and when in an emergency. This will save valuable time and minimize confusion. The Preparation for Flight Checklist is always read, but how often do you really discuss it? Here's a situation that occurred involving emergency ground egress on an unprepared surface. An extra crewmember went to exit out of the pilot's escape hatch while the pilots were in the process of going to the defense station to use their open escape hatches. The result was a collision and temporary confusion. Although the extra crewmember was absolutely correct in his decision to exit out the pilot's hatches (IAW the Flight Manual), the reality of the situation made that route unavailable. This is just one illustration of how prior discussion can really make a difference.

Another important topic related to mission planning is crew rest. Everyone knows AFR 60-1 requires that you have 12 hours of crew rest, with eight hours of uninterrupted rest prior to the flight duty period. Unfortunately, this requirement is often brushed aside. Lack of proper rest can have an adverse effect on performance, especially when a stressful situation unexpectedly arises. Remember too, recent alcohol consumption can also degrade your performance inflight. AFR 60-16, SAC Sup 1, states no alcohol will be consumed eight hours prior to reporting to fly. Save the wild parties for another day. Furthermore, be watchful of what you eat prior to flying; your flight surgeon is a good source of information for proper diet. At least forego the deep fried, fatty foods that can be gas producing (not to mention the effects on the dreaded LDL cholesterol).

Whether you're flying in the seat or as an instructor, your attitude towards safety can make a difference. Brief the mission like you're going to fly it —don't cut corners. Establish safe habit patterns; don't accept a double standard. Mission planning day isn't a golf day, so make it count.

So what have we learned? If nothing else, we know that safety is more than just knowing your emergency procedures, it's a thought process that requires prior preparation — before and during mission planning and the flight. Know the proper procedures, teach them, and accept nothing less than perfection — **Your survival depends on it.**

The New AFR 60-16, SAC Sup 1

SIFC, Castle AFB

Well, now we have it — the long awaited SAC Sup 1 to AFR 60-16. This month we thought it would be helpful to examine the changes in the new regulation to ensure you are current on some of the rules you use each time you fly. The following is an attempt to explain the most significant differences that affect the way we do business today. Enjoy!

Para	Summary of Changes
1-4b	Waiver and exemption requests were added to the text.
1-6a	Regarding alleged flying violations no one in the USAF will release names of any pilots to the FAA/NTSB.
1-10	Explains the definition of a unit commander.
2-3	The HQ SAC/DOO is approval authority for all SAC missions or flight planning software.
2-3a	Justified reason or need for changes or new programs.
2-5b	Allows local pattern only sorties to receive a verbal weather briefing. Crews using the SAC Form 595 or SAC Form 596 and filing to another base must get destination weather and alternate weather observations and forecasts from their departure base.
2-6a	Emphasizes all missions will be briefed IAW SACR 50-12.
2-6b (1) (b)	The use of non-mission equipment aboard SAC aircraft which is not specifically prohibited, must be certified as interference free by ASD/ENACE (example: electric razors, personal computers, etc.)
2-7a	Added . . . for any instruments which present both analog and digital, either presentation is acceptable at the aircraft commander's discretion. Also after vertical velocity indications, "altitude" should be spelled "attitude."
4-1	Deleted . . . "on flights having more than one enroute destination or on a single flight."
4-3c (4)	Reworded slightly; intent the same.
5-1a	Incorporated IMC 88-1 which changed 24 hours to 12 hours for decompression chamber ride.
5-1a (4)	Changed verbiage from . . . "not later than" . . . to . . . "at least before . . . their next scheduled flight."
5-4a	New verbiage added concerning SAC nonstandard formation flying.
5-6d	Added paragraph concerning monitoring of command post frequency.
5-7b	Expanded verbiage to include KC-10 formation climb airspeeds.
5-8a (5) (a)	Expanded verbiage . . . "provided takeoff capability exists according to aircraft tech order data."
5-8a (5) (g)	Expanded to read . . . If conditions change requiring full thrust be used for an intersection takeoff, takeoff will commence from the end of the runway.
5-8a (5) (h)	Explains takeoff procedures for B-1/B-52 aircraft at Nellis AFB, NV.
5-15b	Expanded guidance to include FAA/base flying regulations for Conventional Enhanced Release Training (CERT).
5-22	New paragraph — no peacetime SAC approved mission requires a planned penetration of thunderstorms.

5-22 (1)	Now gives the unit commander authority to launch aircraft at the main operating base if thunderstorms are officially observed between 5nm and 10 nm of the airport. The thunderstorms must not be producing any hazardous conditions at the airport, in the respective landing or takeoff corridor, or are forecast/observed to be moving in that direction.
Table 6-1.1	Added — lists parachute requirements for B-52 personnel not occupying ejection seats.
6-2a (2)	Defines ejection seat procedures for B-1 personnel.
6-2a (3)	NOTE 2 — Added. RC-135 must have a minimum of two parachutes on board for inflight hatch checks.
6-2b	Aircraft commander must make sure each occupant over two years old has an approved seat equipped with a safety belt.
6-2b (1)	New guidance on seat belt usage.
6-2c	Unit commanders shall determine aircrew flight clothing requirements except for helmets and flight gloves.
6-2c (1)	Guidance for helmets consolidated and use of flight gloves is required during certain phases and encouraged at all times in the aircraft.
6-2g	Unit commanders shall determine the policy for pressure suits for flight above FL 500.
6-2g	NOTE: Recommended equipment for that listed in para 6-2 is as published in SACR 55-51.
6-3b	Cannot wear contact lenses when pressure suits are required to be worn.
6-4b	Passenger requirements for parachutes, helmets and oxygen are defined.
6-4b(1)	Test for oxygen usage rewritten and explained.
Table 6-7	(requirements) all occupants oxygen usage.
7-3b (3)	PLASI has been selected as the command standard for SAC to replace the VASI.
8-1a	All new verbiage explaining SAC's tiered structure of flight minimums for IFR operations. This program affects aircraft commanders in all SAC aircraft.
8-4a (1)	Added the Flight Information Handbook (FIH) as a required item for peacetime flights.
8-4a (5)	Added Jeppesen Charts for use when DOD instrument approach charts or host nation aeronautical information publications are not published for the intended landing airport.
8-4d (1)	Explained filing rules when destination weather is below the lowest approach minimums (Tier I or Tier II).
8-4d(1) (a)	Gives visibility and fuel requirements for precision and nonprecision approaches. Deleted the use of intermittent forecast values to determine whether the destination will be below minimums. Use AFR 60-16 guidance.
8-5c	Clarified remote and island destination definition. Also if prevailing weather conditions require an alternate for a remote or island destination, SAC aircraft will have enough fuel on board to hold for two hours at the destination fix in lieu of designating an alternate airfield.
8-8	New takeoff minimums listed in Table 8-1.
8-14a	Deleted —primary agency for destination/alternate weather. Now may obtain this information through any means.
Table 8-1	SAC flight minima redefined.
Table 8-1	NOTE 14. When more than one RVR is reported to the aircraft commander for takeoff, the approach end RVR will be used to determine takeoff RVR criteria.

Well, there you have it, the major changes that affect our daily flight operations. If you have any questions or comments, give us a call at AV 347-4571. Until next month, keep the bars centered.

PROFESSIONAL PERFORMERS

Missile Crew

Crew R-013, consisting of 1Lt Jay B. Helming and 2Lt Michael P. Doyle, 321 SMW, is SAC Missile Crew of the Month. During an alert at Alpha-Zero (A-O) launch control facility (LCF), the crew encountered several significant equipment malfunctions and a potentially dangerous emergency situation. While monitoring a missile guidance system removal and replacement at sortie A-02, the crew received what appeared to be a normal commercial power changeover in their launch control center (LCC). When the LCC tried to switch to standby power, the diesel generator failed and the site dropped back to battery power. The crew immediately referenced their technical order (T.O.) fault procedures for guidance. They directed the facility manager (FM) and cook to the launch control equipment building (LCEB) to survey the area. When the FM arrived, he found the LCEB engulfed in thick, black smoke which seemed to be coming from the diesel enclosure unit and the power control center (PCC) #2. Referencing their emergency procedures checklist, the crew immediately directed the FM to perform actions necessary to isolate the smoldering equipment. Next, the crew summoned a second fire fighting team to standby in case the emergency got out of hand. After the smoke began to dissipate, the FM could effectively determine the extent of the damage--he found the results of an extensive fire and overheat to the diesel generator and PCC 32. The crew then called job control, wing command post, and the squadron to inform them of the situation and current status. Because of the damage to the diesel and the power processor, the capsule would be on batteries for an extended period of time. To conserve the site's battery power, the crew astutely passed radio interrogations of their sorties to another LCC. This action directly contributed to the LCC remaining fully launch capable for an additional seven hours which allowed the crew to complete the extensive retargeting actions and missile test requirements to bring A-02 back to alert. Their timeliness and professional response ensured the sortie returned to full alert status as quickly as possible.

1Lt Jay B. Helming and 2Lt Michael P. Doyle

ICBM Maintenance

SSgt Robert A. McMahon, electro—mechanical team (EMT) inspector/evaluator, quality assurance division, 90th SMW, Francis E. Warren AFB, is SAC's ICBM Maintenance Technician of the Month.

Sgt McMahon was selected as the EMT Chief for the dual Follow—on Operational Test and Evaluation (FOT&E) Glory Trips 126—128. Sgt McMahon led an emergency dispatch to a shutdown missile within hours of the scheduled launch. He quickly and calmly performed a complicated distribution box checkout and two guidance and control liquid cooling systems checkouts. Identifying and correcting the problems, Sgt McMahon brought the sortie back to alert for a successful and on-time scheduled launch. Sgt McMahon routinely volunteers to support dispatching maintenance requirements. He has also initiated a technical order improvement report to rectify a serious oversight concerning the removal and replacement procedures for the launch control center (LCC) battery charger.

Aircraft Maintenance

SSgt David C. Sunderland, 5 BMW, Minot AFB, is SAC's Maintenance Airman of the Month. Presently assigned as the assistant NCOIC of the Defensive Fire Control shop, he is the lead technician/troubleshooter on all test stations and the hot mockup for the AN/ASG-21 Fire Control System (FCS).

Sgt Sunderland has established himself as a reliable and consistently exceptional performer. His indepth knowledge of the FCS and its associated test stations and test equipment has been invaluable. Since returning from temporary assignment with another base organization, he has spent the last two years establishing an exceptional FCS avionics capability of 95.7 percent.

Sgt Sunderland has developed several maintenance aids which have facilitated both maintenance training and unit checkouts. He built a pressure pack test set utilizing an unused test bench. It provided greater safety for technicians, while giving them more work space on a dedicated workbench. He also built a test station breakout box that is used with three different stations.

When maintenance problems develop, Sgt Sunderland is one of the first to seek a solution. When depot didn't have the expertise to repair antenna rotary couplers, Minot was selected to develop a repair capability. Using some innovative techniques, he was able to expeditiously repair these much needed assets. By training all other shop personnel, he has established a unique situation: he is a member of the only shop in SAC that is allowed to perform rotary coupler repairs.

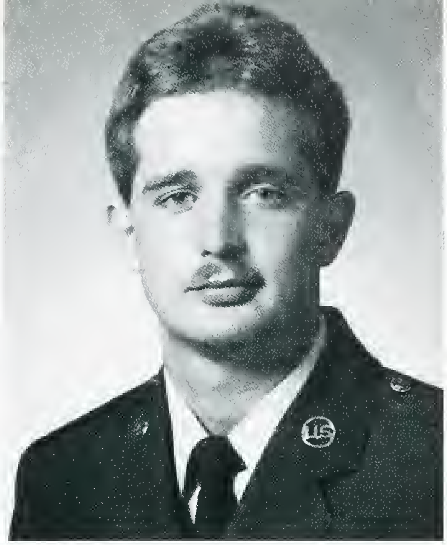
Munitions Maintenance

TSgt Brett W. Currie, 410 BMW, K. I. Sawyer AFB, is SAC's Munitions Airman of the Month.

Currently assigned as NCOIC of Short Range Attack Missile (SRAM) equipment maintenance, he is responsible for the periodic maintenance and daily upkeep on 16 MHU-7M trailers, 13 MHU-123 trailers, 11 MHU-141 trailers, 8 MHU-7M loading adapters, 2 basket assemblies and all associated support equipment valued at $1.3 mission.

Sgt Currie has led his section to continuously ““"Excellent” or better ratings for all Maintenance Standardization and Evaluation Program and higher headquarters inspections in 1989. During the 8th Air Force staff assistance visit in February 1989, only one minor error in Sgt Currie's trailer serial number bin system was found. Not satisfied with this, he completely reorganized the entire bin system and then reworked his master 623 training record. When the SAC IG team came in June 1989, they could not find a single error anywhere in his shop.

While previously assigned as assistant NCOIC of the weapons loading section, Sgt Currie was tasked with reaccomplishing the weapons loading specialty training standard (STS) due to a rewrite. Sgt Currie worked many hours researching the new references added to the STS. When completed, he requested the base training and analysis branch inspect it. The NCOIC of this branch and one of his managers inspected the STS indepth and found no problems, nor could they think of any additional recommendations.



SSgt Robert A. McMahon

SSgt David C. Sunderland

TSgt Brett W. Currie

SAC CRM CORNER

Crew Communications

Lt Col Chuck Korus, USAF (ret)

There is a lot to be said for good communication, but an accurate statement that can be made is that much of it isn't. That opening sentence is not a particularly great example of effective communication. Most likely, though, you understand what was meant. Much of our communication is not good communication. Like too many of our daily attempts at dialogue, the thought is imprecise and vaguely stated. Speakers generally know exactly what they mean to say and assume that their meaning is perfectly clear to everyone else. Listeners too often have no choice but to interpret words as best they can and assume that they understand what the speaker meant.

Every waking hour of every day we make numerous assumptions in our attempts to transmit and receive verbal information, and too frequently we fail to communicate clearly. Our thoughts may be vague or our choice of words poor. We may not enunciate clearly and we certainly don't always pay close attention to what is being said. We might also speak very clearly and precisely or listen attentively and be disrupted by some extraneous activity. We all have been held accountable for statements we are sure we never uttered and been accused of ignoring someone we had no idea was addressing us. As awkward and embarrassing as our conversational inadequacies sometimes are, they seldom have critical impact on our lives.

As SAC warriors the same thing can probably be said of the great majority of your crew communications. Your conversational inadequacies don't often have any major impact on your crew performance. Unfortunately, unlike personal conversations, inaccuracies in your job related communication can, and too often do, adversely impact your performance. The stan/eval and safety shops have no shortage of examples of crew error, incidents, and even major accidents for which the ultimate cause was misinterpretation of some bit of vital information. What can you as professionals, in an environment where effective communication is extremely critical, do to diminish the potential for that misinterpretation?

First, don't ever assume that you know what someone meant to say when there is any amount of uncertainty in your mind. Request a repeat of the last statement or transmission, ask for clarification, or repeat the direction you received, for verification. Second, do not ever assume that you have been understood when there is any reason to suspect that you have not. If anything you say generates an unexpected or even a hesitant response, if you sense any hint of uncertainty, or if you even think you see a doubtful look, repeat what you said and ask for verification. Just as important, when you are monitoring a conversation, do not hesitate to intervene when you think someone else has misinterpreted an important piece of information.

Be precise about how you communicate. Speak clearly, use checklist phraseology or standard terminology where it applies, and ensure that those with whom you are communicating do the same.

It is human nature to believe we have heard what we expected to hear. It is also very human to refrain from questioning something we were supposed to understand, but did not, for fear of appearing stupid. The responsibilities inherent in crewing a SAC bomber, tanker, or ICBM are too grave to permit carelessness or ego to interfere with effective communication. The potential impact of inaccurate communication is unacceptable, especially when the problem is so easy to avoid. Every air and missile crew member in SAC is capable of extremely effective communication on a highly technical level. It is only through complacency or carelessness that those communicative skills fail. Usually, with just a little attention and effort, communication skills can be improved and enhanced to contribute to mission effectiveness and safety.

The SAC Crew Resource Management program will include many opportunities to enhance and practice your communications skills.

SAC SAFETY SCREEN

The SAC Safety Screen is an honor roll of SAC's most professional crews. To gain listing on the Screen, crew members must be nominated by their unit commanders and meet high selection criteria of experience in their aircraft or missile system IWA AFR 1272/SS1.

340 AREFS, Beale Crew S-101: AC Maj William R Halsey, P Capt David E Henderson, N Capt David C Culver, B MSgt Robert L Winston

24 SRS, Eielson Crew 4X: IP Lt Col Roger C Craig, IP Lt Col Gregory D Smith, IN Capt John G Hilgenbrink, MN Capt Michael P Dorais

24 SRS, Eielson Crew S-11: TC Capt Ricky A Sowell, ATS 1Lt Earl F Culek, ATS Capt Gary W McDaniel, R3 Capt Jeffrey E Lutes, R4 Capt Randy R DeRosa, PT MSgt Richard L Oehrig, ET SSgt Michael A Abshire

5 SRTS, Beale Crew: P Maj James M Milligan, P Capt Kevin F Riebsam

99 SRS, Beale Crew: U2 Pilot Capt Greg S Lamb

509 AREFS, Pease Crew E-120: MP Maj Richard A Gowen, MC 1Lt Eric W Wilks, IN Capt Eric L Huston, MB Sgt James R Biggs

351 SMW, Whiteman Crew R-031: MCCC 1Lt Robert Young, DMCCC 2Lt David Carter

351 SMW, Whiteman Crew S-170: MCCC Capt Curtis Ellis, DMCCC 2Lt Anthony Arciero

321 SMW, Grand Forks Crew S-110: MCCC lLt Joni J Cooley, DMCCC 2Lt Kathleen M Taylor

596 BMS, Barksdale Crew S-71: IP Capt Steve Bass, MC Lt Mike Branch, IRN Capt Floyd Gowans, MN Lt John Pyles, IE Capt Rick Holt, IG SrA Danny Parker

71 AREFS, Barksdale Crew R-133: MP Capt Eric Furches, MC Lt Mark Cantrell, MN Capt Nathan Morris, BO SrA Thomas Morrison

32 AREFS, Barksdale Crew R-012: MP Capt Craig Edkins, MC Capt Mark Souter, FE SSgt Michael McKittrick, BO Sgt Eric Thomas

2 AREFS, Barksdale Crew R-063: MP Capt Rob Allen, MC Lt Jim Connolly, FE SSgt Greg Healey, BO TSgt Charlie Marrone

2 AREFS, Barksdale Crew S-051: MP Capt Sue Desjardins, MC Lt Michelle O'Connor, FE MSgt John Sokol, BO TSgt Dennis Fox

7 AREFS, Carswell Crew R-141: AC Capt Michael A Kolb, P Capt Mark A Hill, N 1Lt Stephen L Manspeaker, BO Sgt Floyd W Atkins

7 AREFS, Carswell Crew R-143: AC Capt Steve Jensen, P 1Lt Bill Ousley, N 1Lt Mike Christoff, BO AlC Chick Creely

9 BMS, Carswell Crew R-81: AC Capt Douglas E Fuller, P 1Lt Mark E Louviere, RN Capt Larry E Germann, NN 1Lt Joseph N Laztus, EW Capt Edward C Kraft III, AG SSgt Richard Fuentes

20 BMS, Carswell Crew S-02: AC Capt Allan F Cobb, P 1Lt Ronald M Bryant Jr, RN Capt Ludwig Schweinfurth IV, NN Capt Paul A Griffith Jr, EW Capt James P Guse, IS TSgt Thomas E Hayden

28 AREFS, Ellsworth Crew E-120: IP Lt Col Gene Loofbourrow, P Capt Rich Frankel, N 1Lt Ken Murray, IBO TSgt Dan Gilson

37 BMS, Ellsworth Crew R-13: AC Capt Charles A Petty, P Capt Scott A Jordan, OSO Capt Thomas A Powell, DSO Capt Richard E Prater

77 BMS, Ellsworth Crew R-81: AC Capt David W Bronson, P Capt James A Schwindt, OSO Capt Michael B Stock, DSO Capt Daniel J Novick

FLARE

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As part of the Year of Reviewing the Fundamentals SAC, Warriors recognize their proud military heritage.

Out of our warrior past
greatness will spring.